

59383 U.S. PTO
08791057
01/13/97

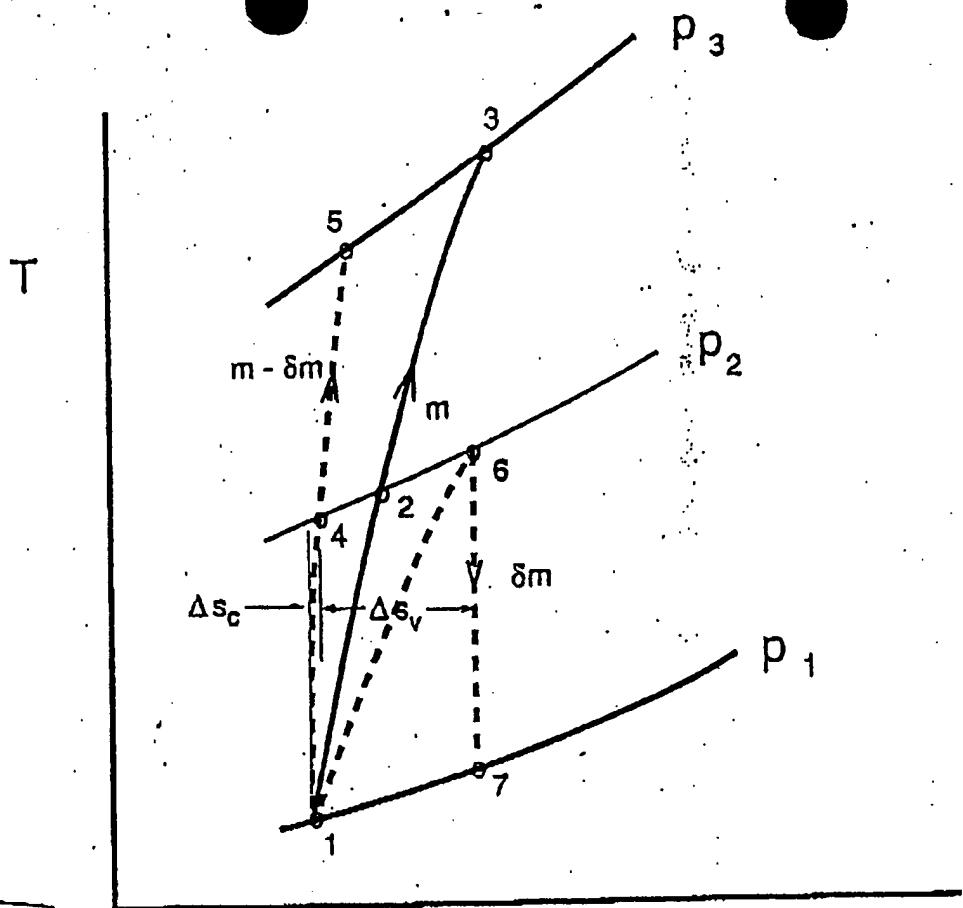


FIG 1

Figure 1 Thermodynamic representation of the effect of high-entropy fluid removal on compression efficiency

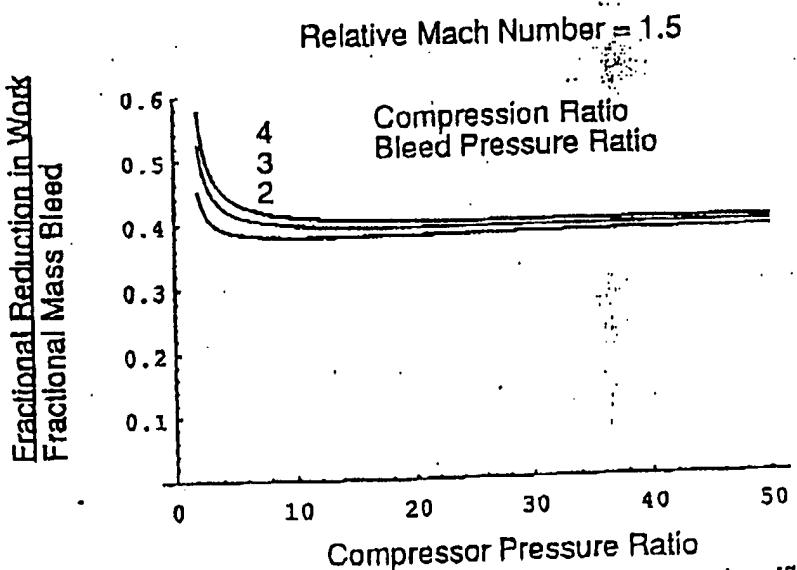
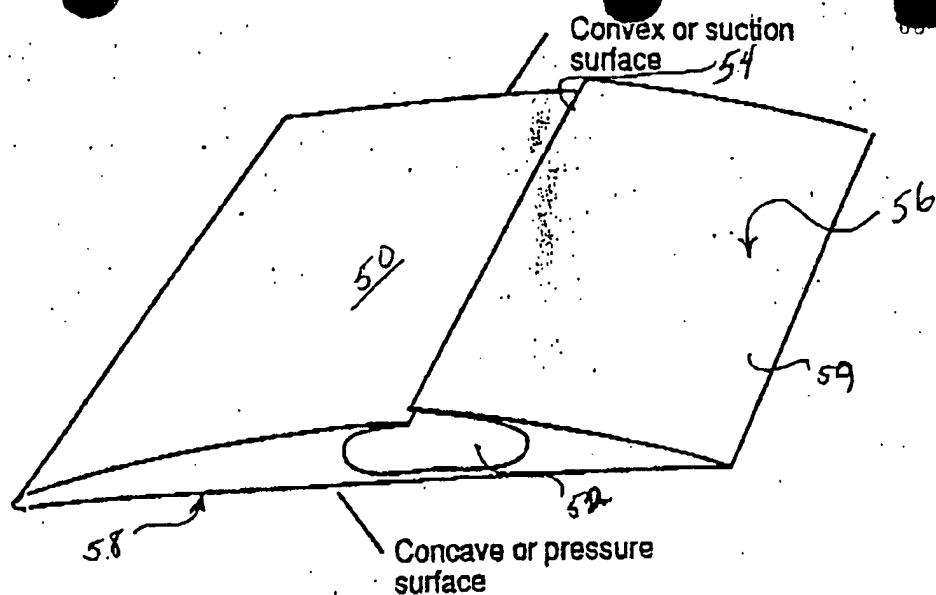


Figure 2 Fractional reduction in work (or fractional increase in efficiency) per fraction of fluid removed.

FIG 3



59383 U.S. PTO
08791057
01/13/97

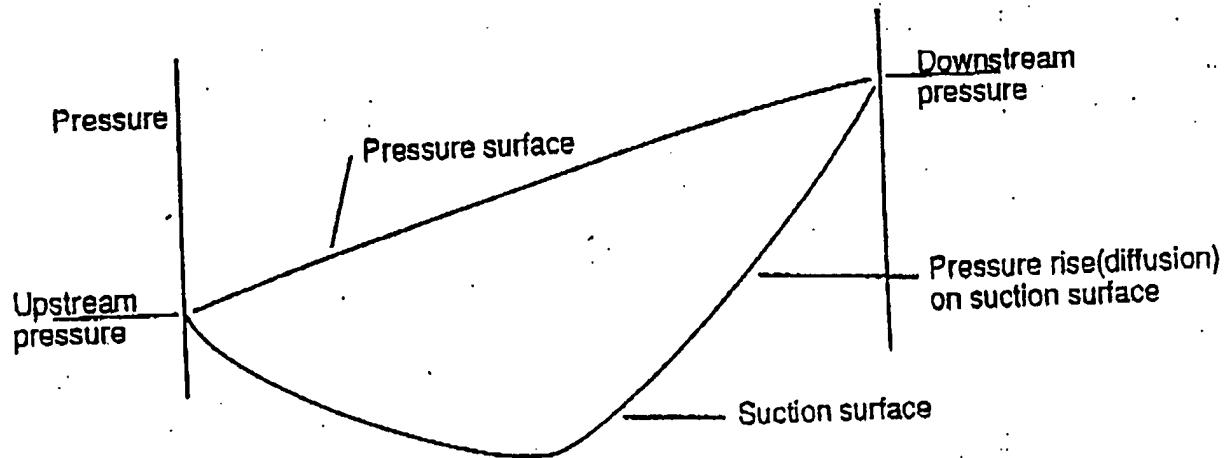


FIG 4

59383 U.S. PTO
08791057
01/13/97

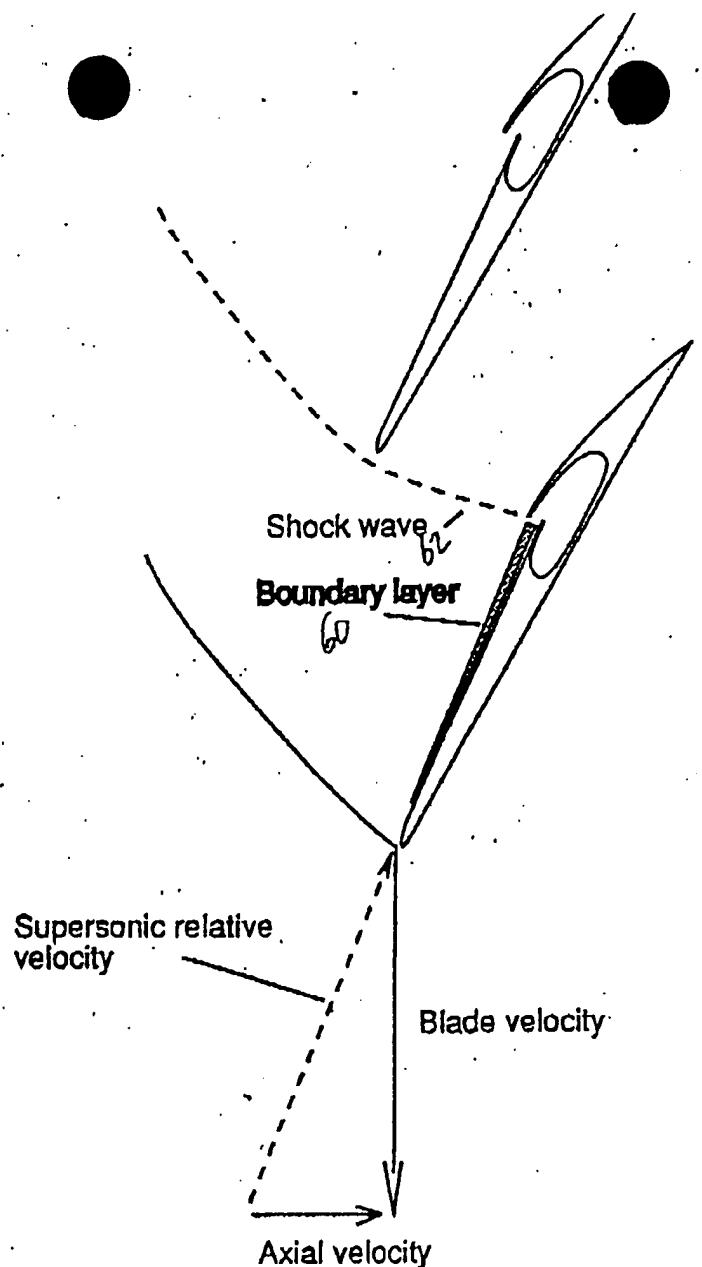


Figure 5 illustrating fluid removal ahead of shock impingement

FIG 6

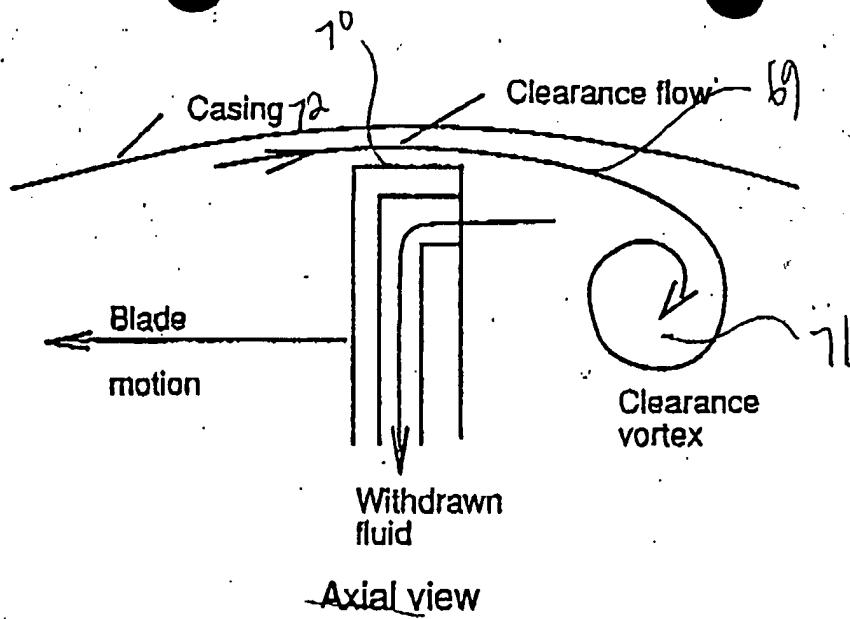
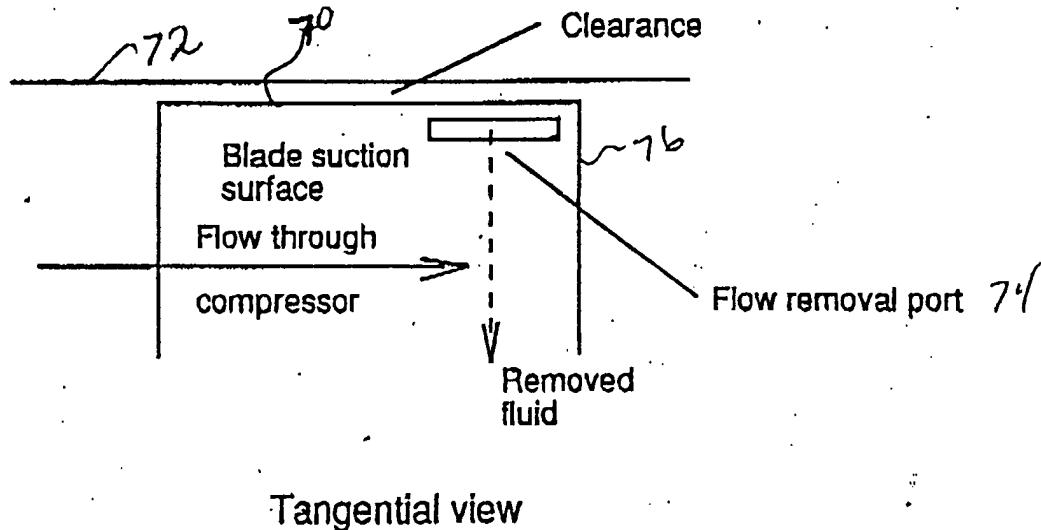


FIG.7.



Tangential view

Illustrating fluid removal near trailing edge of suction surface at blade tip, to negate clearance vortex blockage.

01/13/97

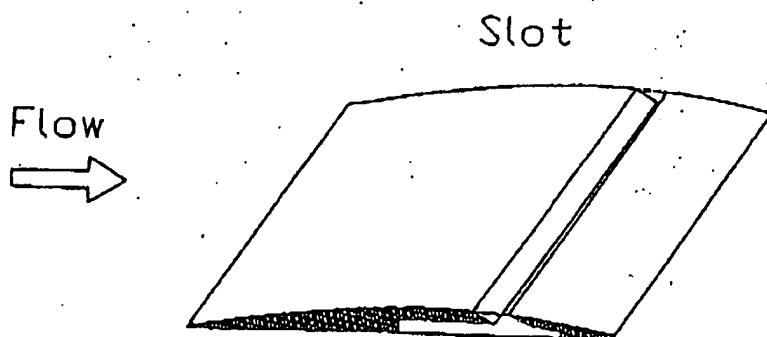


FIG 9

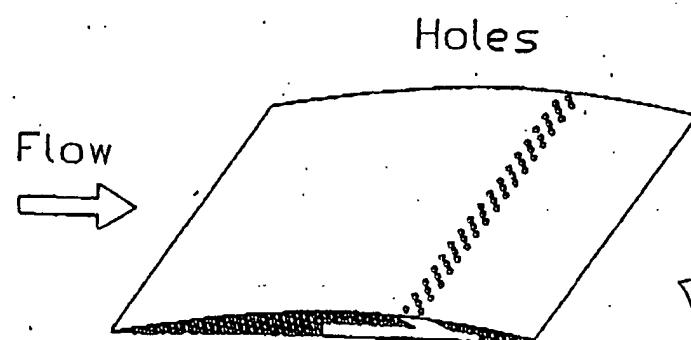


FIG 10

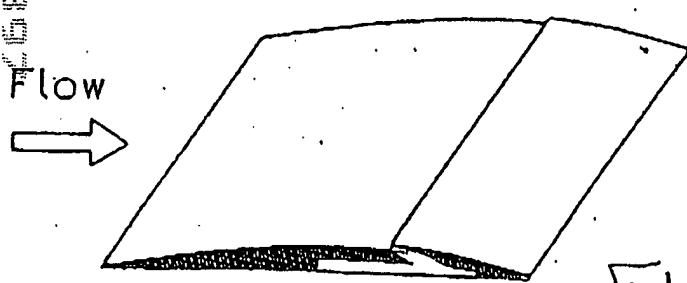


FIG. 8

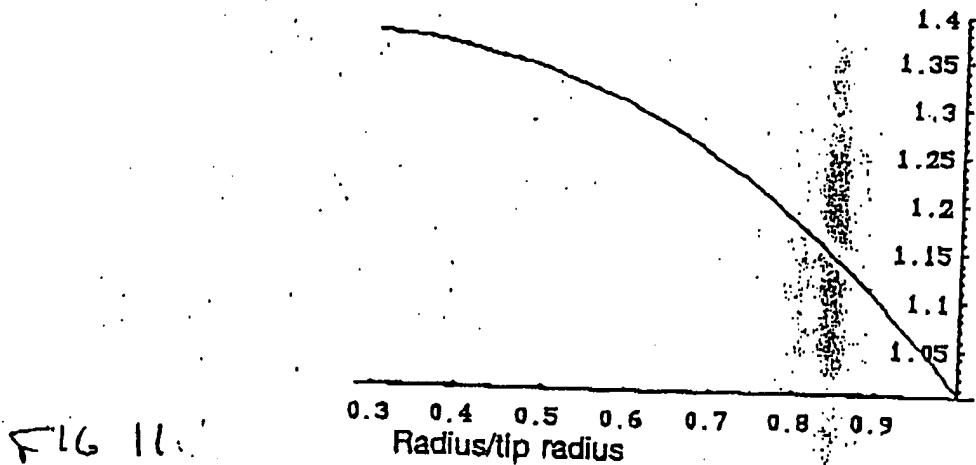
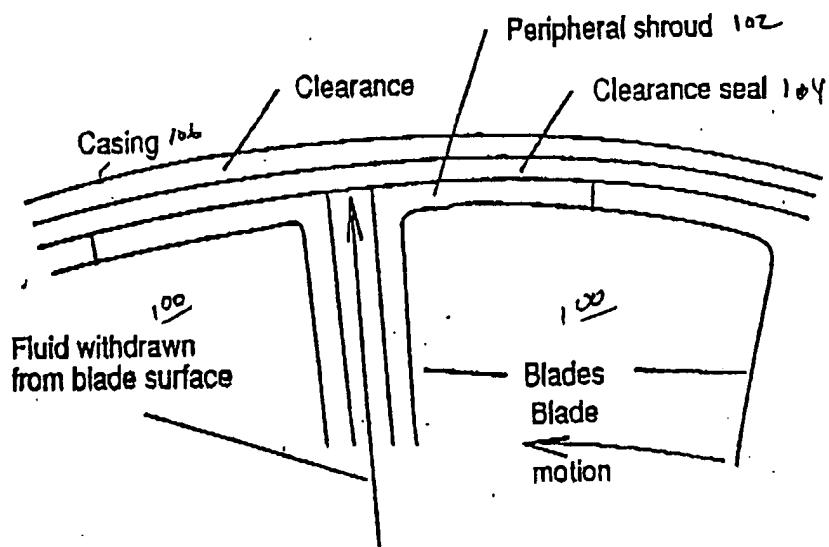


Figure 11 Variation with radius of ratio of blade-relative stagnation pressure to passage pressure



Axial view

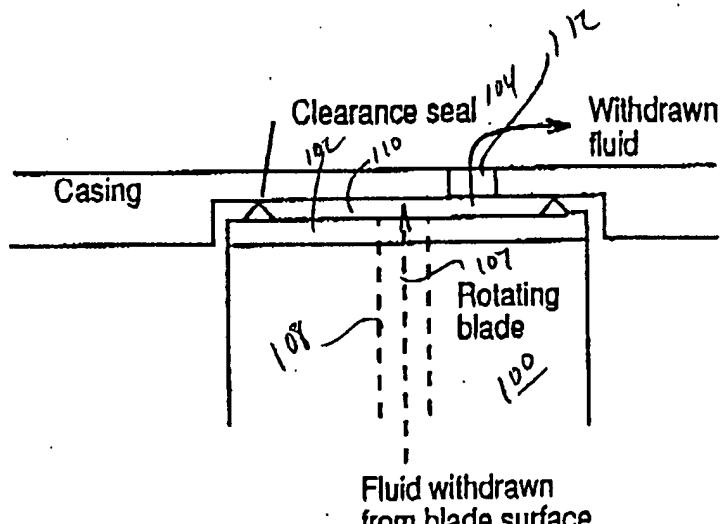


Fig 13

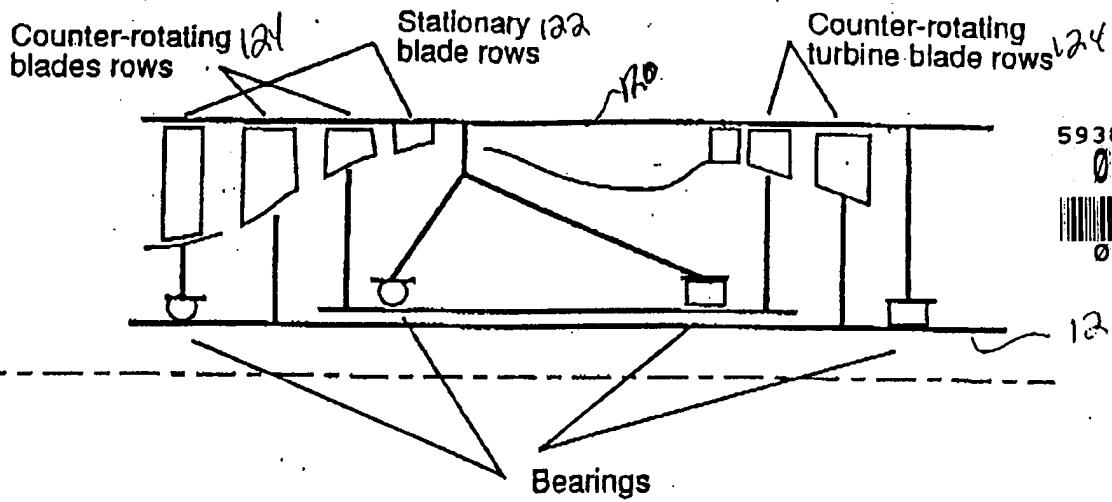


Figure 14 Schematic arrangement of counter-rotating compressor with stationary blade rows upstream and downstream of counter-rotating pair..

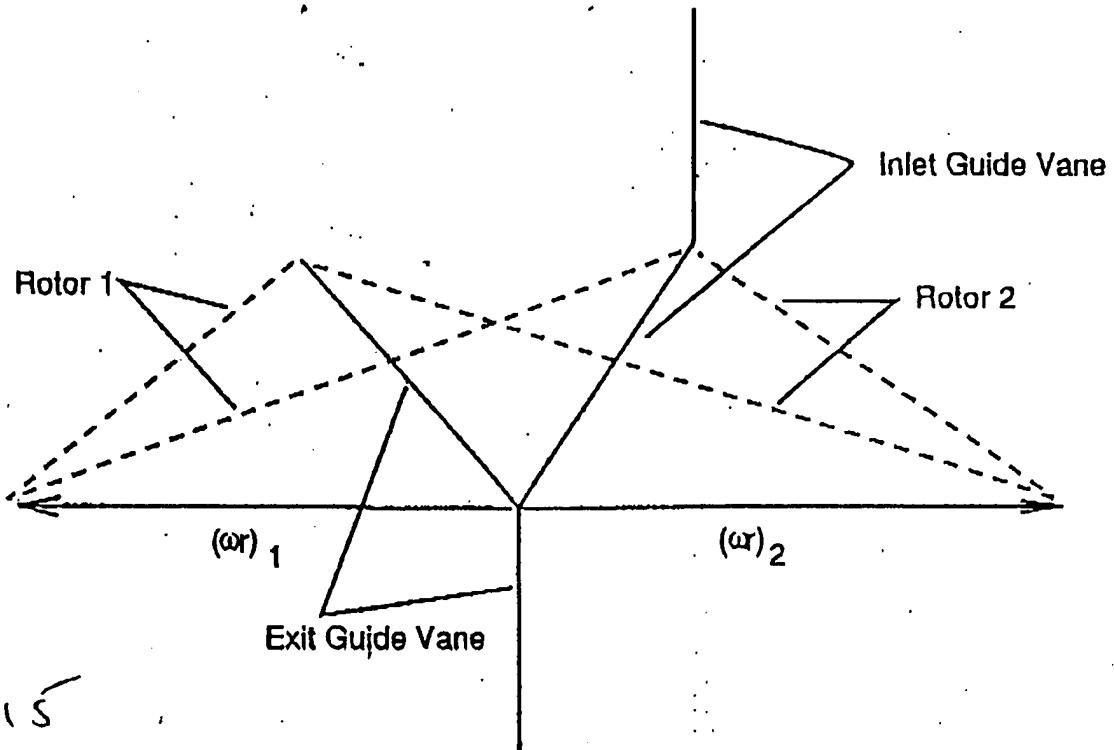


Figure 15. Velocity triangles for counter-rotating compressor with inlet and exit stator blades, and balanced diffusion in the two rotors.